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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,214	04/02/2004	Liangchi Hsu	871.0110.U1(US)	2420
29683	7590	04/26/2005	EXAMINER	
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			NGUYEN, BRIAN D	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. **10/817,214**Applicant(s) **HSU ET AL.**

Examiner

Brian D Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed on 12/20/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 11-12 are objected to because of the following informalities:

Claim 11, line 18, "a reverse acknowledgment channel" seems to refer back to "a reverse acknowledgment channel" in line 7. If this is true, it is suggested to change "a reverse acknowledgment channel" in line 18 to --the reverse acknowledgment channel--.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-9 and 11-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5, line 4, "the transition" is unclear if the applicant is referring back to "a transition by the mobile station from the active state to the control hold mode" in lines 1-2 of claim 6 or "a transition by the mobile station from the control hold mode to an active state" in lines 5-6 of claim 5.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: a step before "sending an acknowledgement one a reverse acknowledgement channel by the mobile station" in which the base station sends some kind of

signal to the mobile station so that the mobile station can send an acknowledgment on a reverse acknowledgement channel. The claim is unclear because the steps of the claim are not in order.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-4 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-4 are directed to software (access control identification code) per se, which lacks a tangible embodiment.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Lindskog et al (6,622,251).

Regarding claim 1, Lindskog discloses a medium access control identification code (IMAC_ID) assigned by a base station from a MAC_ID space to each one of a plurality of mobile stations; wherein the MAC_ID is assigned in an ascending order from the MAC_ID

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space for a first group of mobile stations, and wherein the MAC_ID is assigned in a descending order from the MAC_ID space for a second group of mobile stations (See col. 6, lines 20-27; col. 9, lines 13-18; col. 10, line 52-col. 11, line 28 where two groups of mobile terminals are assigned MAC_ID in ascending and descending orders).

8. Claims 5-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Duncan Ho et al (2003/0128683).

Regarding claims 5, 7, and 9, Duncan Ho discloses a method for transition from a reverse link Control Hold Mode for a cellular communications system comprising a base station in communication with a mobile station, wherein a reverse link data channel is in operation without an assigned Forward Packet Data Channel, the method comprising: imitating a transition by the mobile station from Control Hold Mode to an active state, by sending a transition mode request; turning on a rate request channel by the mobile station, the mobile station requesting a reverse link transmission; monitoring a rate grant channel with the mobile station; acknowledging the reception of the mode transition request by sending an individual grant to the mobile station from the base station, thereby granting permission to transmit; transitioning the mobile station to active state upon receipt of the grant, the mobile station starting to transmit on the reverse link data channel in autonomous mode; and, commencing monitoring of a Forward Acknowledgement Channel with the mobile station. Wherein the base station controls the transition from the active state to Control Hold Mode when the Forward Packet Data Channel is assigned. Wherein the rate of the grant channel is reduced to reduce the mobile station power consumption (see abstract; paragraphs 0009, 0012, 0057-0061; and figure 4).

Regarding claims 6 and 8, Duncan discloses initiating a transition by the mobile station from the active state comprises: gating a reverse pilot and a reverse rate request channel; detecting the transition by the base station; stopping the transmission on the Forward Acknowledgement Channel; stopping the monitoring of the reverse link; and transitioning the mobile station to Control Hold Mode. Wherein a reverse rate request channel is gated at a reduced rate of one half or less (see paragraphs 0031-0043).

Regarding claim 10, Duncan discloses method for transition from a reverse link Control Hold Mode for a cellular communications system comprising a base station in communication with a mobile station, wherein a reverse link data channel is in operation without an assigned Forward Packet Data Channel, the method comprising: initiating a transition by the base station from Control Hold Mode to an active state by sending a transition mode request; sending an individual grant via a forward grant channel to the mobile station to initiate the mode transition; and transitioning the mobile station to the active state (see abstract; paragraphs 0009, 0013, 0062-0066; and figure 5).

Regarding claims 11-12, Duncan discloses A method for transition from a reverse link Control Hold Mode for a cellular communications system comprising a base station in communication with a mobile station, wherein a reverse link data channel is in operation with an assigned Forward Packet Data Channel, the method comprising: initiating a transition by the mobile station from Control Hold Mode to an active state, by sending a transition mode request; sending an acknowledgement on the reverse acknowledgement channel by the mobile station; initiating on a rate request channel by the mobile station, the mobile station requesting a reverse link transmission; commencing the monitoring of a rate grant channel and a Forward

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Acknowledgement Channel with the mobile station; acknowledging the reception of the mode transition request by sending an individual grant to the mobile station from the base station, thereby granting permission to transmit; commencing continuous transmission by the mobile station on a reverse channel quality indication channel; turning on a reverse acknowledgement channel; commencing monitoring of the Forward Packet Data Control Channel; and transitioning the mobile station to active state upon receipt of a control message with specific message type, the mobile station starting to transmit autonomous rate on the reverse link data channel. Wherein the reverse channel quality indication channel is gated at a reduced rate of one half or less (see abstract; paragraphs 0009, 0012, 0038, 0057-0061; and figure 4).

Regarding claim 13, Duncan discloses a method for transition from a reverse link Control Hold Mode for a cellular communication system comprising a base station in communication with a mobile station, wherein a reverse link data channel is in operation with an assigned Forward Packet Data Channel, the method comprising: initiating a transition by the base station from Control Hold Mode to an active state by sending a transition mode request; settling an extended message type identifier indicating that the mobile station is to exit the packet data channel Control Hold Mode; initiating the mode transition by sending a medium access control identification code by the granting base station via a Forward Packet Data Control Channel to the mobile station; turning on a Reverse Channel Quality Indication Channel and a Reverse Acknowledgement Channel by the mobile station; monitoring the Forward Packet Data Control Channel; and transitioning the mobile station to the active state (abstract; paragraphs 0009, 0013, 0062-0066; and figure 5).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al (6,622,251).

Regarding claims 2-4, Lindskog discloses dividing the mobile terminals into two groups and assigning the MAC_ID in ascending and descending orders as described in previous paragraph. Lindskog does not specifically disclose the first group uses a forward link channel and the second group uses a reverse link channel. However, to divide the terminals into two groups based on forward and reverse link channel is a matter of design choice because the mobile terminals with common characteristics/features can be grouped into the same group. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to group the mobile terminals based on forward/reverse link channel in order to meet specific needs.

Response to Arguments

11. Applicant's arguments filed 12/20/04 have been fully considered but they are not persuasive.

Regarding claims 1-4, the applicant argued that *the MAC_ID is used to order the wake-up Packet Data Unit (PDU) in the Frame Control Channel (FCCH) and the Slow Broadcast*

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Channel (SBCH) in two groups. However, MAC-ID grouping is not disclosed by Lindskog et al. to exist during the actual MAC ID assignment. This clearly differs from claim 1, that recites in part: "wherein the MA_ID is assigned in an ascending order from the MAC_ID space for a first group of mobile stations, and wherein the MAC_ID is assigned in a descending order from the MAC ID space for a second group of mobile stations". This argument is not persuasive because Lindskog does disclose dividing the terminals into two groups, the mobile terminals are automatically assigned to a group based on their MAC-ID as described in col. 9, lines 13-15. In col. 6, lines 22-23 and col. 11, lines 1-7, Lindskog discloses ascending and descending order of the MAC-ID.

Regarding claims 5-13, the applicant argued that *For example, paragraph [0009] recites in part:*

*"..an apparatus is presented for implementing an improved Control-Hold Mode within a remote station, wherein the remote station operates within a commemoration system that employs packet data channels with associated control channels, and associated feedback channels, the apparatus comprising: a memory element; and a processing element configured to execute a set of instructions stored in the memory element, the set of instructions for: ceasing the monitoring of packet data channels **from a base station**; ceasing the monitoring of control channels associated with the packet data channels **from the base station**; turning off a reverse link acknowledgment channel; gating off transmissions from the remote station to the base station; and intermittently transmitting over a data control channel" (emphasis added).*

In contradistinction, claims 5-13 address the behaviors of mobile stations and base stations, including transition mechanisms, when reverse data channels are in a control hold state. This being the case, Ho et al. cannot anticipate the claimed subject matter. The examiner disagrees because Ho discloses reverse data channels are in a control hold state. See abstract:

"Methods and apparatus are presented for implementing an improved Control-Hold Mode that reduces the load of the reverse link and reduces the battery consumption of

remote stations. While a remote station is in the improved Control-Hold Mode, the circuitry that monitors the forward packet data channels and the associated control channels are turned off. Since the forward packet data channels and their associated control channels are not monitored, **the operations of the reverse channels can be gated off to predetermined duty cycles, or set on intermittent transmission modes, or shut down completely.** Transitions from the Control-Hold Mode to the Active Mode can be initiated by the remote station or by a base station. When a transition is initiated by a remote station, the remote station transmits a signaling message to a serving base station and then starts operating the feedback channels before actually receiving forward link signals.” (emphasis added).

See also “The present invention relates generally to communications, and more specifically, to reducing the load of **the reverse link** and the power consumption of remote stations” in paragraph 0002; “gating off transmissions **from the remote station to the base station**” in paragraph 0009; and “starting **reverse link transmissions** in accordance with the Active Mode” in paragraph 0012.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

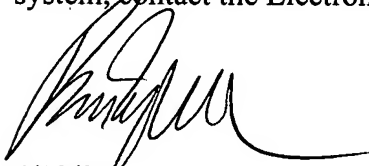
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



4/19/05

BRIAN NGUYEN
PRIMARY EXAMINER